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ABSTRACT

This self-study, undertaken in March 1981 to collect and analyze data regarding the library's preservation problems and to develop a program addressing these needs, is presented in four sections. The first briefly describes the major findings of the study. The following section summarizes the major areas of need identified by an analysis of the data collected and a review of the recommendations of the task forces, including: environmental control; organization and coordination of preservation activities of staff and users; provision of facilities, equipment, and supplies for preservation activities; crisis management; and budgeting and funding for preservation. The third section presents goals and objectives for a comprehensive planning project, and the final section consists of detailed action plans for implementing these goals over the next several years. The plans identify specific steps to be taken, the staff members or groups to carry out each step, and time tables for completion. A list of participants in the preservation planning project and a 4-item bibliography are provided. (RBF)

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PRESERVATION PLANNING PROJECT

REPORT

Charlottesville, Virginia

October 1981

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TABLE OF CONTENTS

Letter of Transmittal ii

Participants in the Project iii

Acknowledgements iv

I. Introduction 1

II. Major Findings of the Study 3

III. Preservation Needs 4

Environmental Control 4

Organization and Education 6

Facilities, Equipment and Supplies 9

Crisis Management 11

Budgeting and Funding 11

IV. Goals and Objectives 13

V. Detailed Planning 25

Footnotes 56

Bibliography 58

Appendices

Situational Analysis Report

Report of the Task Force on Environmental Conditions

Report of the Task Force on Physical Condition of the Collections

Report of the Task Force on the Organization and Operation of Preservation Functions

Report of the Task Force on Crisis Management

Report of the Task Force on Preservation Resources

October 21, 1981

Mr. Ray W. Frantz, Jr.
University Librarian
University of Virginia Library

Dear Mr. Frantz:

The Study Team herewith submits to you the report of the Preservation Planning Project conducted at the University of Virginia Library. We trust that you will find the report to present a thorough and accurate analysis of the Library's preservation needs. In addition, we hope that its recommendations will assist you, the Directors' Council, and the entire Library staff, as we begin to address those needs.

Sincerely,

Mildred Abraham

Mildred Abraham

Patricia Bennett

Patricia Bennett

Janet Kern

Janet Kern

Carol Pfeiffer

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When the University of Virginia Library was chosen to participate in the Preservation Planning Project, no one had a clear idea of how much time would be taken up by the study or of how many staff members would be involved. It is certainly clear that the project could not have been carried out without the help and support of the entire Library staff. In addition to direct participation in the study, staff throughout the Library willingly gave their time to assist in the data-gathering activities and to aid Task Force members who invaded their departments to survey, count, observe, and interview. A general understanding and tolerance of the pressures brought to bear on participants was demonstrated by supervisors and co-workers throughout the long months of planning, data-gathering, and report preparation. Without their willingness to take on extra burdens of everyday activities, the participants could not have completed their work. We owe them all our sincere thanks.

We would like to acknowledge in particular the following individuals and groups:

-The Task Force members, who managed to complete a number of large data-gathering projects and write reports in an all-too-brief period of time. Only their willingness to commit themselves to an intense period of work made this possible.

-The Directors' Council, and particularly Mr. Frantz and Mr. Stubbs, for their ongoing support and suggestions throughout the project.

-The University administrators who granted interviews which provided us with valuable background information--William Middleton, Martin Altschul and Herman Kirby.

-The Environmental Science Department of the University, which loaned us environmental monitoring equipment.

-Patricia McClung, who provided excellent leadership in her role as Study Team Chairman in the first phases of the project, and who, much to our regret, left the Library staff before the project was completed.

-Pam Darling, the project director, who, in addition to preparing a comprehensive self-study manual, lent invaluable support, encouragement, and assistance during her visits and phone conversations.

-David Buxton, whose constant attention to the needs of the word processors, prevented panic or an erased report.

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The Study Team

I. INTRODUCTION

Preservation of library materials is a responsibility which libraries have begun to recognize and respond to only in the last few decades. Scientific research beginning in the 1950's has proved that rapid deterioration of many book papers due to acid content can reduce a book's useful life to only twenty-five to fifty years. Additional factors contributing to the rate of decay of printed and other library materials include storage conditions, environmental fluctuations, pollution, processing practices, and use. The implications of these problems for the research library--a traditional preserver of society's collective knowledge, wisdom and experience--are serious indeed.

In addition to the magnitude of the deterioration found in most library collections, several other aspects of the preservation problem have made it difficult for libraries to respond effectively. These include a lack of technology which could provide methods to deal with deterioration; the fact that activities which affect the physical state of library materials cut across traditional lines of responsibility; and the need for libraries to balance their curatorial responsibilities against public service. The library profession's growing interest in these problems has resulted in fledgling preservation programs at several major research libraries. In addition, professional library organizations have begun to implement educational and resource-sharing programs dealing with preservation issues.

In early 1981, the University of Virginia Library was chosen to be one of three libraries nationwide to participate in a study of its preservation needs under the direction of the Office of Management Studies of the Association of Research Libraries. The Preservation Planning Project provided a framework for the systematic collection and analysis of data on the nature and extent of our preservation problems and for the development of a program to address them.

The self-study began in March 1981, with the appointment of a Study Team composed of the members of the existing Preservation Committee and a representative of the Library administration. The study was conducted in three major phases, concluding in October 1981. The phases were as follows:

1. A background investigation of the Library's institutional role and goals, the historical development of the collections and facilities, and the institutional and external forces affecting preservation, conducted by the Study Team.

2. Collection and analysis of information in five major areas central to preservation planning: physical environment, present condition of the collections, organization and operation of current preservation activities, crisis management, and resources available to support an expanding preservation program. This phase of the study was carried out by four task forces, comprised of 25 members of the Library staff, who submitted reports to the Study Team in late June.

3. A review and synthesis of the task force findings, analysis of needs, formulation of recommendations and detailed planning for change, conducted by the Study Team and culminating in this report.

II. MAJOR FINDINGS OF THE STUDY

The findings of the Preservation Planning Project confirmed that deterioration poses a major threat to the collections of the University of Virginia Library. The Task Force on the Condition of the Collections surveyed bound volumes through a stratified sample of holdings in the Alderman stacks, the Science/Technology Information Center, and the Fine Arts Library. Twenty-seven percent of the volumes inspected and graded in the survey were found to be deteriorated.[1] A random sample of the PR and PS classes in Alderman showed 47% of the volumes to be too brittle to repair or rebind.[2] Portions of the Library's extensive microform holdings were inspected and found to be scratched, warped or otherwise defective. In addition, examination revealed that most of our newspaper holdings, including unique copies of some Virginia newspapers, are seriously embrittled and cannot be used in their current state.[3] These findings are particularly distressing in light of the Library's on-going commitment to building its research collections.

The extent of deterioration of the Library's holdings must also be evaluated in the light of our curatorial responsibilities. Although many pieces may be expendable or replaceable, others are likely to be scarce or to have important value as artifacts. The magnitude of the deterioration represents a significant financial loss to the Library, as well as an intellectual and artifactual one.[4]

In addition to revealing the scope of our preservation problems, the project identified a number of factors which affect the Library's ability to cope with the situation. Perhaps the most important of these is the documented lack of adequate environmental control which could retard further deterioration of the collections. The study also provided a structure for the review and evaluation of our current preservation practices and procedures in their organizational framework, and indicated opportunities for change which could significantly enhance the Library's ability to respond to its problems.

The following section summarizes the major areas of need identified in the course of the Preservation Planning Project. Section IV presents goals and objectives for a comprehensive preservation program, and the final section consists of a detailed plan for implementing that program over the next several years.

Our participation in the study can be viewed as the first step in the plan, providing an opportunity to focus on the problems and subject them to rigorous analysis. In addition, resources for future improvement have been identified, and the process of educating staff to our preservation problems and their possible solutions was begun through the involvement of individuals from all departments in the project.

III. PRESERVATION NEEDS

Through evaluating the data gathered in Phase II and reviewing the recommendations of the task forces, the Study Team identified five major elements needed for development of a comprehensive preservation program for the Library. They are:

1. environmental control;
2. organization and coordination of preservation activities and education of staff and users;
3. provision of facilities, equipment and supplies for preservation activities;
4. crisis management; and,
5. budgeting and funding for preservation.

This section of the report describes these areas of need and synthesizes the data related to them. Footnotes refer the reader to sections of the appended situational analysis, task force reports, and articles from the body of preservation literature which provide more detailed support for the assertions which follow.

Environmental Control

Among the external factors which contribute significantly to the Library's preservation problems are the environments in which materials are housed, as well as the basic physical structures employed to store, transport and use them.

Temperature, humidity, air quality and light all influence the nature and rate of deterioration in library materials. In the extensive literature on the causes of paper deterioration, it is recommended that, in order to retard deleterious chemical reactions and other potential threats, the following conditions should exist.

1. Temperature should be maintained at between 60° and 70° F year-round.
2. Relative humidity should be maintained at between 45% and 60% year-round, without fluctuations of more than a few percentage points in any 24-hour period.
3. Particulate matter and harmful gaseous compounds such as sulfur dioxide, nitrous oxides and ozone should be removed through air filtration.

4. Levels of exposure to ultraviolet radiation from artificial and natural light sources should be kept below 75 microwatts and materials should be protected from excess heat emanating from incandescent light bulbs.

5. Facilities and materials should be regularly cleaned to reduce the amount of potentially damaging particulate matter in the environment and the threat of infestation.[5]

The preservation study confirms the Library administration's conviction that environmental control is a major need throughout the library system. In locations monitored by the Task Force on Environmental Conditions, temperatures consistently exceeded the recommended range (except in the Barrett Room), despite the fact that the monitoring period took place during relatively mild spring weather. Temperatures as high as 89° F were recorded in the Alderman stacks during the study. Records kept since February 1979 include readings of 97° F. In addition, no locations except the McGregor Room registered the recommended humidity levels throughout the monitoring period, and many showed drastic fluctuations in relative humidity. Although a full study of air quality was not within the scope of the project, observations on the inefficiency of the current air filtration system in Alderman and on the quantity of dust and other particulate matter in the stacks were recorded.[6]

Results from the investigations of light levels were more encouraging. Readings proximate to fluorescent fixtures with shielded bulbs fell within the recommended range; areas proximate to exposed fluorescent bulbs and to natural light did not. No measures of surface temperature of materials exposed to incandescent light were taken.[7]

Dirt and dust levels in inspected areas of the Alderman stacks and on materials themselves were high, except in the Rare Book Department where a cleaning program has been implemented.[8] No data were collected concerning the threat of harmful infestations of insects or vermin in the course of the self-study.

Taken as a whole, however, the environmental conditions existing throughout the Library system pose a grave threat to the survival of the collections. Even in "air conditioned" locations such as the Fine Arts Library, temperatures frequently exceed the recommended levels and relative humidity fluctuates widely. Available literature on paper impermanence reports that increases in storage temperatures reduce the half-life of paper and that water absorbed from the storage environment aggravates paper deterioration.[9] Given the documented state of deterioration already existing in the collections, the need to stabilize the physical environment to retard further deterioration is clear.

In addition to controlling the environment to reduce the rate of deterioration, the Library can diminish the potential for direct physical damage to materials caused by the equipment employed for their housing, transportation and use. The design and maintenance of shelving, book ends, storage cabinets, exhibit cases, book returns, book trucks and trays, work surfaces, viewing and listening equipment, and photocopy machines can all affect the degree of physical stress to which materials are subjected. Although the potential for damage may seem slight in comparison to that resulting from the lack of environmental controls, design problems or defects in such equipment have a major impact on the condition of a particularly important class of library materials--those which are heavily used. Factors to consider in evaluating the preservation implications of equipment are well-documented and should facilitate further review of needs in these areas.[10]

Organization and Education

Preservation-related activities occur regularly throughout the Library, and almost all tasks have an impact on the physical state of materials. Routine actions, such as handling, shelving, marking, and inserting security strips, can increase general wear and tear on library materials or even cause specific damage. Decisions concerning such treatment options as first-time binding, rebinding, repair, and replacement can prolong or reduce the life-expectancy of our materials. They can also facilitate or hamper the effectiveness of our overall preservation efforts. For example, skilled staff time might be wasted mending a book whose chief value is its intellectual content and for which a twentieth century reprint is available; or a nineteenth century binding of great artifactual value may be destroyed by rebinding.

In-house repair and binding practices can also hasten the deterioration of materials, even though the intent is to preserve. For instance, improper hinging of endpapers can cause unnatural stresses in the book which proceed to tear it apart, and binding pamphlets in acidic materials hastens the chemical deterioration of the paper through acid migration. Contracting with outside suppliers of preservation services, such as binders and photocopy and microfilming labs, increases the risk of subjecting materials to improper handling or the use of inappropriate methods, unless expectations and specifications are clearly stated and results monitored.

With these concerns in mind, the Study Team analyzed the task force findings, particularly those of the Task Force on the Organization and Operation of Preservation Functions. The following organizational and educational needs were identified.

1. Because preservation-related activities take place throughout the Library on a routine basis, there is

a need for overall coordination of those activities to insure that staff time is spent effectively; that decision-making and actual treatment recognize and incorporate the growing range of preservation options; and that curatorial and public service responsibilities are appropriately balanced.

2. A large number of staff throughout the system routinely make decisions concerning first-time binding, the identification of damaged and deteriorating materials, remedial treatment, and other preservation options (replacement, reproduction, etc.), which directly affect the physical state of library materials. In very few cases do those staff have training or guidelines to support their decision-making. If such guidelines and training were provided, it would promote consistent and proper treatment of materials as well as educating staff members to the preservation implications of their routine duties.

3. In-house repair and remedial treatment of materials from the general collections take place in a number of locations. Although some training is now provided, a formal, centralized training program and coordination of these activities would eliminate inefficient duplication of effort and uneven quality of results.

4. Instruction in the care and handling of library materials can not only improve the treatment they receive, but also contribute to staff and user awareness of broader preservation issues. As the preservation implications of routine library activities, such as the shelving, transportation and handling of materials, are identified, they need to be formally incorporated into the training and supervision of staff on all levels. In addition, user education would help our patrons to recognize their role in our preservation efforts.

5. A formal preservation policy statement, demonstrating and communicating our commitment to improving the condition of the collections, will provide justification for the goals and objectives of our program to library staff, patrons, and University administrators.[11]

It is important to distinguish between the impact of improvements in these areas and the benefits accruing from a change such as the provision of environmental control. Environmental control retards the long-term deterioration of library materials as they sit on the shelves. A coordinated, informed program to support preservation decision-making and

treatment has widespread, direct impact on materials as they are handled as a part of daily operations. Such a program would insure that all library tasks are performed with adequate attention given to the preservation of the collections, and that activities directly related to preservation are carried out by trained staff, equipped with the best information, methods and materials, making use of the steadily expanding range of preservation options.

Current preservation literature, much of which is available in the Technical Resource Packets provided for this project, includes descriptions of a number of preservation programs developed at other research libraries. These libraries have often encountered difficulties accommodating responsibility for preservation within their organizational structures, since the activities cut across so many existing lines of authority. Yet they have recognized that the pervasive nature of preservation necessitates its articulation and integration as a full-fledged element of the library's organization. Typically, a phased plan, with gradual consolidation of preservation functions, has been implemented.

The Task Force on Organization, after analyzing their findings concerning our current preservation operations and the descriptions of programs elsewhere, developed an outline for a full-scale, coordinated preservation program, which would address local needs as they perceived them. They proposed that the program include the following organizational elements:

1. a preservation unit to administer and coordinate preservation activities throughout the Library;

2. a conservation studio to handle in-house mending, binding and boxing, as well as full restoration work required by special collections; and,

3. a collection maintenance program to insure proper handling, storage and cleaning of materials system-wide.[12]

The Study Team concurred with the Task Force's assessment of needs and endorses the proposed model as the long-range goal toward which the Library should work.

Recognizing that a fully-developed program could not be immediately implemented, the Task Force on Organization assigned much of the interim responsibility for action to the Preservation Committee. In its first year and a half, the Committee has laid the foundations for expanding preservation activities and it can continue to assist in planning and undertaking future improvements. However, the amount of time a committee could devote to instituting programs, writing guidelines, or training staff is so restricted that the implementation of basic improvements would inevitably take many years. In addition, a

committee is not an appropriate locus for the authority to coordinate activities, assign daily tasks, or monitor performance in departments and branches throughout the library system.

Although a limited amount of work can be appropriately and effectively accomplished by a committee, a fully-developed preservation program will eventually require the appointment of a preservation administrator, with the necessary authority to direct those preservation activities which are centralized and to coordinate those which cut across existing departmental lines. In addition to overseeing implementation and providing ongoing training, guidance and support for the performance of preservation activities, a preservation administrator could give full-time attention to planning, gathering data, establishing priorities, and preparing documentation to develop and support a preservation program which continues to be responsive to the Library's changing needs and goals.

Facilities, Equipment and Supplies For Preservation Activities

As preservation efforts are expanded and improved, additional facilities, supplies, and equipment will be needed to support them. Some types of preservation treatment have particular requirements, including running water, proper ventilation and lighting, and specialized supplies and equipment.

At present, space for preservation work in Alderman is at a minimum, severely hampering current activities. Mending, in-house binding, and binding preparations all share an area which has no immediately available water, only "normal" lighting, and ventilation which is insufficient for work with adhesives, solvents, deacidification solutions, and other preservation agents. Preservation work is also performed in cramped quarters in the Rare Books and Manuscripts departments and, although Manuscripts does have running water available, ventilation is a problem in both places. Branch libraries which currently do limited repair work have even more severe space problems.[13]

A major contributor to the preservation problems of all libraries has been the lack of safe, high quality supplies. As acid-free and archival quality supplies became available, they were first introduced in formats suitable for use in the preservation of special collections materials. Recently, safe adhesives, acid-free pamphlet binders, and other high quality materials have become more widely available from library suppliers. However, difficulties in acquiring information about appropriate materials, in addition to their somewhat higher cost, have often worked against the full use of such supplies by library mending and in-house binding units. In addition, as more suppliers have jumped on the acid-free "bandwagon," lesser quality supplies masquerading under the terms "acid-free" and "archival" have been introduced on the market. There is a clear need for quality control to be exercised by knowledgeable buyers.

A coordinated ordering and purchasing process can facilitate such quality control and offer economies through bulk purchasing and efficient record-keeping. The first departments ordering preservation supplies were the Binding/Mending section and the Manuscripts and Rare Books departments. The Manuscripts Department has also supplied folders, boxes, and other supplies to departments with limited needs for these materials. Branch libraries seeking to improve their preservation efforts have had no central source of information and no ordering process through which they could obtain appropriate supplies. Some departments and branches order through the Manuscripts Department, some through the Binding/Mending section, and some place orders directly through Business Services. Sometimes departments or branches are unable to get the supplies they need.[14]

As a rule, supplies are ordered on a first-come, first-serve basis, with no one person responsible for evaluating need or appropriateness. The Business Services section has stated that they would prefer all such ordering to be done through one unit. Also, some supplies have fallen into budget categories other than that for supplies, chiefly because of cost. For instance, manuscript boxes are paid for out of the binding budget, but acid-free folders for manuscripts are paid for out of the supplies budget.[15]

The responsibility for the ordering of preservation supplies needs to be assigned to one individual or department to provide quality control and coordinated purchasing. The Binding/Mending section has been working to upgrade the quality of supplies, and this process can be continued through ongoing testing and monitoring. In addition, budgeting for preservation supplies needs to be coordinated, so that sufficient money is available to support the needs of all the Library's collections.

Purchasing of equipment for preservation work presents a different set of problems. Attention needs to be given to the writing of specifications for purchase requisitions sent out on bid, to insure that purchases of equipment meet specialized needs. The appropriateness of and need for specific equipment, such as phase box makers, hand-sewing frames, and binding presses, should be evaluated by a knowledgeable individual or group, to avoid duplication, to assign priorities to purchases, and to insure that the best equipment is selected. Sufficient funding must be allocated to support this purchasing. This process is complicated by the fact that preservation equipment is at present buried in the equipment requests submitted by various departments.[16]

Crisis Management

Another area of concern is the Library's ability to deal with accidents or disasters which could threaten the collections. Ongoing programs are needed to insure effective prevention and preparedness--to reduce the possibility of disaster and to equip library personnel and local authorities to respond if a disaster does occur. Though there is little local potential for natural disaster, the age and condition of the facilities create very serious hazards, as evidenced by the Library's record of "mini-disasters."[17]

Of all of the problems addressed in the study, this one has already received the most thorough Library-wide attention. The Preservation Committee's interim report on disaster preparedness, recent work by the Committee on Library Safety and Emergencies, and the work of the Alderman Library Security and Fire Protection Committee have all contributed to our progress in this area. However, certain specific areas outlined in Section IV still need attention. The Library has developed a strong basis on which to build a truly responsive program of crisis management and must now work toward actual implementation.[18]

Budgeting and Funding for Preservation Activities

It is apparent from the preceding review of the basic needs identified in the Preservation Planning Project that, although some preservation problems can be addressed within the current budgetary structure, certain activities will require additional funding.

The Study Team has identified the following categories of need which will require financial support as the Library's preservation program expands. They are:

1. renovation/construction costs, including environmental control and deferred maintenance;

2. operating expenses--equipment, supplies, binding, continuing education, travel costs, space renovation, and other contractual services (e.g. housekeeping, pest control, and mass deacidification);

3. materials expenditures, including replacement copies, preservation photocopying, and microfilming; and,

4. staffing for expanded preservation activities.

The projection of actual cost figures was beyond the scope of this study, but some methods for obtaining them have been identified. Information on the costs of expanded preservation

activities at other institutions is available.[19] As the program is implemented, the Preservation Committee and the administration will need to work together to gather, analyze, and evaluate cost figures for each phase of implementation.

The Library will have to look beyond state and local sources in order to fund some phases of expanded preservation effort. Other libraries have tapped private donors, foundations, and federal grants from the National Endowment for the Humanities and Title II-C of the Higher Education Act. Some costs may be shared through emerging cooperative preservation efforts by bibliographic utilities or regional conservation centers.[20]

IV. GOALS AND OBJECTIVES

This section translates the needs identified through the study into a number of broadly stated goals and specific objectives which, taken together, form the basis of a comprehensive preservation program. More detailed strategies for implementing specific phases of the preservation program are presented in the final section of the report.

Major goals are:

1. Collections are housed under the best possible environmental conditions in order to retard chemical and physical deterioration. Temperature, humidity and light levels are constantly maintained within recommended ranges. Adequate air filtration and pest control are provided, and facilities and materials are regularly cleaned.

2. Equipment employed for the housing, transportation and use of library materials does not contribute unnecessarily to their deterioration.

3. Responsibility is designated within the organizational structure and new organizational mechanisms are created to improve and coordinate current preservation activities and to implement new activities throughout the system. Objectives include: providing policies, guidelines, and training for all preservation activities and for all library units handling and storing materials; expanding and upgrading preservation practices and procedures to take advantage of the full range of available preservation options; and educating staff and users.

4. Sufficient space for consolidation and expansion of preservation activities is allocated, and funds are provided for necessary renovation.

5. Processing of preservation supply requests is centralized to facilitate budgeting, and an ongoing quality-control program is undertaken. A high priority is assigned to purchases of new equipment for preservation and the criteria applied to such purchases insure their high quality.

6. A crisis management program is implemented to reduce the potential for disaster and to prepare the staff to respond to any disaster which might occur.

7. The Library administration demonstrates a financial commitment to preservation by reallocating the existing budget and seeking additional funding to provide support for expanding preservation activities. Budgeting decisions reflect the importance of the preservation program in relation to other goals and priorities of the Library.

Goal 1: Collections are housed under the best possible environmental conditions in order to retard chemical and physical deterioration. Temperature, humidity and light levels are constantly maintained within recommended ranges. Adequate air filtration and pest control are provided, and facilities and materials are regularly cleaned.

Despite the obstacles which stand in the way of achieving this goal, failure to provide adequate environmental control undermines the long-term effectiveness of progress in all other areas of preservation activity.

There are a number of component elements in any plan which addresses the problem of Library-wide environmental control. Each has a different level of feasibility, some more within the Library's immediate power to achieve than others. In terms of their impact on the collections, the two most important objectives are to provide full environmental control for the locations which currently have none, and to upgrade the existing systems in order to maintain temperature and humidity at recommended levels and provide adequate air filtration.

The achievement of the first objective, climate control for Alderman and the Science/Technology Information Center, depends on raising the necessary capital from either the State or another source. The Study Team met recently with the Assistant Executive Vice President for the Physical Plant and received information and advice which will assist the Library in presenting the best possible case to the University, State or any other potential funding source. A detailed position paper on the need for action, which combines data collected during this project on present conditions with the scientific evidence supporting the need for controls, should be presented to the University administration as it begins to evaluate capital outlay requests for the 1984-86 biennium. In addition, $10,000-15,000 will need to be allocated from overhead funds for an engineering pre-planning study, which will provide a reliable preliminary estimate of the feasibility, scope and cost of the entire project.[21] These are the initial steps which must be undertaken in order to achieve the larger goal of procuring funding for the design and installation of environmental control systems for these locations. A detailed timetable for this effort is presented in Section V of the report.

The second objective, upgrading current systems, has several facets. Basically, there are two types of systems in operation: one where the environmental control system governing a library space is part of a large building-wide system (e.g., Education, Fine Arts) and the other where air-conditioning and any humidity control are provided directly using portable units. Additional information on the nature of systems in use will have to be

gathered to develop more detailed plans for upgrading. The monitoring program begun during this study should be expanded to all locations to collect sufficient information on the effectiveness of current systems. In addition, the Library should undertake to formalize its exemption from any energy conservation restrictions, so that the potential for some level of climate control is utilized effectively.

In addition to these two major objectives, a number of smaller steps can be taken to improve overall environmental conditions in the Library system. First, a program for cleaning materials could be undertaken, perhaps as part of a larger collection maintenance program. Reducing the amount of particulate matter in the environment will reduce the potential for damage to materials from abrasion, soiling and staining, and increased acid deterioration. A cleaning program could be combined with other preservation activities, such as systematic screening for damaged materials or a leather-dressing program. It is most easily incorporated into the existing system in conjunction with taking inventory of the collections. A more detailed description of the proposed collection maintenance program appears on p.20.

In addition, a phased plan to protect materials from the harmful effects of light can be instituted. This process might include replacing some incandescent fixtures with filtered fluorescent ones, installing UV filters on fluorescent bulbs where necessary, and protecting materials from direct exposure to natural light. Of these, the third step is the most important because of the level of UV radiation involved. A more detailed study of specific needs and costs involved will have to be made before an adequate plan for gradual improvement can be devised.

Finally, further investigation of the extent and quality of our contractual services for the cleaning of facilities and for pest control should be undertaken to insure that both programs are responsive to the Library's needs.

Goal 2: Equipment employed for housing, transportation and use of library materials does not contribute unnecessarily to their deterioration.

Although some equipment will inevitably contribute to the deterioration of materials, as does any handling and use, care should be taken to minimize this damage. In reviewing future equipment requests, consideration should be given to the preservation implications of each potential purchase, along with its cost and appropriateness. Equipment requested should be evaluated for any potential for damage or stress inherent in its design, and should be inspected on arrival to identify any design flaws or defects which pose a threat to materials.

Past purchases targeted for immediate review are book drops, photocopy machines, and library delivery truck trays.

1. Book drops should be individually inspected, unnecessary ones eliminated, and poorly designed ones replaced. Book drops should be locked during hours the Library is open.
2. Photocopy machines should be individually inspected and requests forwarded to Printing Services to replace all machines with models which allow full page copying with the book opened at an angle less than 180 degrees.

3. Library delivery truck trays should be modified or replaced to insure that they protect materials to the greatest extent possible during transportation.

All other equipment should be inventoried and inspected for possible replacement, repair and/or maintenance. Estimates of the amount needing replacement and a phased plan to purchase it can then be developed and implemented.

Goal 3: Responsibility is designated within the organizational structure and new organizational mechanisms are created to improve and coordinate current preservation activities and to implement new activities throughout the system. Objectives include: providing policies, guidelines, and training for all preservation activities and for all library units handling and storing materials; expanding and upgrading preservation practices and procedures to take advantage of the full range of available preservation options; and educating staff and users.

The study has identified several organizational elements which will provide the necessary support for expanding our preservation program. Most important is a preservation unit, headed by a professional preservation administrator, to coordinate and expand preservation activities throughout the system. From analysis of the current situation, it is clear that the lack of a coordinated, consistent, and informed approach to preservation poses a serious threat to the collections. Because preservation-related activities take place throughout the library system, centralizing the responsibility for their coordination can insure that this problem is addressed as effectively as possible.

A preservation administrator would, in cooperation with appropriate departments and branches,:

1. recommend policies and programs to guide present preservation operations and future expansion;

2. develop, implement, and monitor procedures and guidelines for use by those specifically involved in preservation decision-making and practices;

3. provide ongoing intensive training to staff members performing these duties;

4. develop general preservation education programs for staff and users;

5. supervise preparation of materials for commercial binding, set binding standards and guidelines, and negotiate with binders;

6. participate with bibliographers in making decisions to replace, repair, transfer, or withdraw deteriorating materials;

7. assist departments in developing programs to address specialized preservation needs;

8. gather data, analyze needs, and prepare documentation for use in planning, organizing,

staffing, and budgeting for preservation functions; and,

9. participate in local, regional, and national preservation programs.

It is recommended that the preservation administrator report to the Associate University Librarian, and that the preservation unit be an independent section responsible for coordinating preservation functions in all departments, but without departmental status. The Binding/Mending section can then be placed under the supervision of the preservation administrator. The unit should be provided with additional or upgraded staff at the faculty, state-classified, and student levels as they are needed to support expanding preservation activities. After the preservation unit is well-established, a study of the implications of consolidating all initial physical processing of materials (marking, stamping, inserting security strips) within the preservation unit is recommended. Such a study would examine the effects on workflow, the physical transportation of materials, staffing, space, and other costs and benefits which it would generate.

The Library is currently restricted by a freeze on new positions until June 1984, but, because of the importance of a preservation administrator to the overall program, it is recommended that, if possible, a professional position be transferred from within the current organizational structure. Until a preservation administrator is appointed, the Preservation Committee, in cooperation with the Directors' Council and appropriate departments, could oversee the implementation and monitoring of our preservation goals. However, empowering the Committee to enable it to fill this role would constitute a change in the Library's organizational functioning.

Following the establishment of the position of preservation administrator, a detailed investigation should be made of the cost/benefit implications of upgrading the present in-house mending unit to a full conservation studio, responsible for all in-house binding and repair, including full conservation and restoration binding, mending, boxing, and document restoration. Such a section would require the establishment of a position for a trained conservator at the professional level. The investigation should include careful analysis of the restoration needs of the special collections departments, as well as other locations which house rare materials. An examination of current funding provided through the binding budget for contractual book and document restoration should be conducted, to assess how completely our needs are met.

Within the current organizational structure, a full-scale collection maintenance program could be developed and implemented, including established routines for the identification of damaged materials; systematic preservation surveys; a cleaning

program; and ongoing monitoring of environmental conditions in all locations. Implementation of this program involves several elements:

1. appointment of a staff member in each unit in the system which houses materials to serve as stack supervisor, where such responsibility has not been designated;

2. formal training in the care and handling of books for all shelvers;

3. monitoring of environmental conditions;

4. training staff in the use of guidelines for identifying damaged materials;

5. institution of a pilot cleaning program; and,

6. institution of small-scale, systematic preservation surveys in selected areas of the collections.

In order to begin to make progress towards our overall goal, the following interim objectives are recommended to be carried out by the Preservation Committee, in cooperation with the appropriate departments and staff:

1. review binding options, write guidelines for binding decisions, arrange for instruction of those responsible for making such decisions;[22]

2. with bibliographers, establish uniform procedures for preservation searching;[23]

3. develop general and specialized education programs for staff and users;

4. invite a specialist to conduct a workshop/review session on mending and in-house binding techniques and materials, and provide ongoing, centralized training for all staff involved in these activities;

5. establish guidelines for remedial treatment;

6. establish guidelines for identifying damaged materials; and,

7. develop guidelines for preservation microfilming and photocopying.

Goal 4: Sufficient space for consolidation and expansion of preservation activities is allocated, and funds are provided for necessary renovation.

Because expansion of current preservation efforts will necessarily be a phased activity, any new allocations of space for the present Binding/Mending section will require long-range planning. Any expansion of mending and in-house binding will require additional space for the use of new equipment. Allocated space will need to be renovated to provide adequate light, ventilation and running water, and be large enough to permit further expansion adequate for the needs of a conservation studio. In addition, a study should be made of current space used for repairs and treatment in other locations, such as branch libraries and the special collections departments. While not as much space will be needed in these locations, a sufficient amount for compact and well-designed work stations, to be used only for repairs, is necessary.

Goal 5: Processing of preservation supply requests is centralized to facilitate budgeting, and an ongoing quality-control program is undertaken. A high priority is assigned to purchases of new equipment for preservation and the criteria applied to such purchases insure their high quality.

Appointment of a knowledgeable staff member as coordinator of preservation supply purchases is recommended. This will insure that all requests for supplies receive the same consideration in relation to overall preservation efforts, and will centralize quality control and the selection of vendors. A rough budget for preservation supplies can be established so that sufficient funding will be available for the most necessary supplies and future budget levels can be projected. A review of current supplies by a specialist is recommended as an educational tool for staff involved in their purchasing and use. Ongoing testing and monitoring of products can then be carried out by the supplies coordinator. All requests for bids should contain specifications written to insure that the necessary level of quality or type of equipment is obtained.

Goal 6: A crisis management program is implemented to reduce the potential for disaster and prepare the staff to respond to any disaster which might occur.

To improve the Library's ability to prevent disasters, the Study Team recommends that the following steps be taken.

1. Implement the monitoring program being developed by the Committee on Library Safety and Emergencies to identify potential hazards.

2. Continue to work with the Physical Plant Department to insure that they are responsive to the Library's needs, both in handling emergency service requests and by completing deferred maintenance projects.

3. Provide all libraries with adequate fire extinguishers, and develop a plan to install fire and water detection systems in all locations.

An adequate level of disaster-preparedness can be achieved by completing the work begun by the Preservation Committee. This includes purchasing emergency equipment and supplies, completing the Disaster Action Manual, and training Disaster Action Specialists to handle salvage operations. A local salvage plan, including evacuation and salvage guidelines, will be written by the Disaster Action Specialists after they have received adequate training by a conservation specialist. An ongoing staff education program should be developed by the Committee on Library Safety and Emergencies to acquaint personnel with basic emergency procedures. In addition, local fire and safety officials should be contacted and educated to the Library's concerns. The Library administration should continue to examine and update insurance coverage, and begin to develop a program of duplicating for permanent, safe storage such records as the shelf list and circulation files, which will provide adequate documentation of losses in the event of a disaster.

Goal 7: The Library administration demonstrates a financial commitment to preservation by reallocating the existing budget and seeking additional funding to provide support for expanding preservation activities. Budgeting decisions reflect the importance of the preservation program in relation to other goals and priorities of the Library.

The Study Team recommends that the Library administration consider the reallocation of present faculty and state-classified positions and student hours to provide staffing for expanded preservation activities. While certain activities can be absorbed by existing staff in current positions, others will require additional staffing. Careful cost/benefit analysis of each alternative can begin by collecting information on the current time and pay levels of staff presently involved in preservation activities and then projecting them to cover increased duties. The effects of the potential loss of staff in other areas will need careful evaluation.

Portions of both the state budget and overhead funds could be reallocated to cover operating expenses and materials expenditures relating to preservation activities. This reallocation could take place gradually and continue until the budget has increased sufficiently to cover the costs of these activities.

Participation in the Preservation Planning Project demonstrates the Library's commitment to addressing its preservation needs and responsibilities. As our preservation activities expand, funding to support them will need to be sought from external sources including the state and federal governments, private donors, and foundations. Areas of major expenditure could include staff for a fully-developed preservation/conservation unit, design and installation (or modification) of environmental control systems, a program of mass deacidification to retard the chemical deterioration of materials, or eventually the construction of new library buildings. The study has provided the groundwork to support requests for funding and has identified and outlined mechanisms for collecting additional data. Making full use of this information, the Library can now develop and implement a strategy to procure additional funding from appropriate sources.

V. DETAILED PLANNING

This section of the report presents a number of detailed action plans leading toward achievement of the goals outlined in the previous section. The plans include specific steps to be taken, identification of recommended staff members or groups to carry out each step, and timetables for the completion of each plan. Actions recommended to be carried out in the coming year are accompanied by detailed schedules; others are defined only by the year in which implementation is to take place. In some cases, the first step or steps in a plan are scheduled for the first year of implementation, with the remaining phases postponed until subsequent years.

These action plans have been drawn up by the Study Team as a draft for the Library administration's consideration. Because to some extent the plans were formulated by considering preservation problems in a limited context, implementation of this program will require their coordination with the Library's other goals and objectives. The findings of the self-study communicate the urgency of our preservation problems, and provide a compelling argument for the assignment of a high priority to the Library's preservation efforts.

The Study Team recommends that while the program should be reviewed in its entirety, the initial approval process should focus on those parts of the program for which specific activities are scheduled to take place in the first year. Activities scheduled for the second or third year of implementation have been described in order to convey how steps taken now will be part of a comprehensive and coordinated plan to protect and preserve the Library's collections. However, changing circumstances within the Library and the University, as well as the rate at which implementation proceeds, will mean that adjustments should periodically be made to the plan. An annual review of the plan will facilitate this process.

The review could begin with a summary report prepared by the Preservation Committee. This report would describe progress in those areas in which scheduled activities have been initiated and indicate scheduled activities not yet begun. To assist in preparing this report, departments and individuals who have been assigned tasks could submit progress reports to the Committee. The Committee can then propose detailed planning for the next year, based on the accomplishments to date and taking into account relevant changes in other Library programs.

Using this report, the Library administration can evaluate the success of the program. The detailed planning for the next year can be reviewed and approval given for those activities

which the administration feels are feasible and in balance with its overall priorities.

Recommended plans of action are presented here in the suggested sequence of their implementation:

1. Procure climate control for Alderman and Science/ Technology Information Center.

2. Obtain formal exemption from energy conservation restrictions and coordinate environmental control throughout the library system.

3. Expand the range of binding options and educate decision-makers.

4. Establish program for preservation searching, photoduplication, and microfilming.

5. Provide space and renovate facilities for preservation activities.

6. Implement a coordinated plan for disaster prevention.

7. Implement a coordinated plan to insure that Library staff can effectively meet any disaster which threatens the Library's collections.

8. Coordinate the purchase of preservation equipment as part of the overall program.

9. Coordinate purchasing and monitor quality of preservation supplies.

10. Continue to improve in-house mending and binding techniques.

11. Establish staff education programs on the care and handling of books and other library materials.

12. Establish a preservation unit.

13. Implement a coordinated collection maintenance program.

14. Upgrade equipment employed for the housing, transportation and use of library materials.

15. Establish user education programs.

16. Upgrade current air-conditioning/heating systems to full climate control systems.

17. Upgrade the cleaning of facilities and pest control.

18. Control light levels in areas where materials are housed.

1) Procure climate control for Alderman and Science/Technology Information Center.

Who	What	When
1. Preservation Committee	Initiates environmental monitoring program for Alderman and Sci./Tech.	Dec. 1981
2. Preservation Committee	Prepares position paper on the need for environmental control	Nov. 1981-Feb. 1982
3. Library Administration/Preservation Committee	Contracts with preservation consultant to make site visit and prepare report in support of above	Feb.-March 1982
4. Preservation Committee	Submits report	April 1982
5. Library Administration	Submits position paper and consultant's report to University Library Committee and University administration	May 1982
6. Library Administration/Preservation Committee	Hold preliminary discussions with Development Office on alternative sources of funding for climate control (foundations, government grant agencies, etc.)	May 1982
7. Library Administration	Plans and commits overhead funds (c. $10,000-$15,000) for engineering pre-planning study; selects consultant	April-Aug. 1982
8. Library Administration	Contracts with engineering consultant to carry out pre-planning study	June-Aug. 1982
9. Engineering Consultant	Carries out pre-planning study in consultation with Preservation Committee and Library administration	July-Oct. 1982

Who	What	When
10. Library Administration	Submits results of pre-planning study to University administration in support of 1984-86 capital outlay request for authorization and state funding	Oct. 1982
11. Library Administration	Submits position paper, consultant's report, and results of the pre-planning study to the Development Office in support of requests for foundation, government, or private support	Nov. 1982
12. Library Administration	Continues to work with University administration and Development Office until goal is achieved	Ongoing activity

2) Obtain formal exemption from energy conservation restrictions and coordinate environmental control throughout Library system.

Who	What	When
1. Director for Administrative Services	Using position paper on environmental needs, drafts Memorandum of Agreement between the Library and University administration, stating the need for exemption and emphasizing the effects of temperature and humidity fluctuations on materials	March 1982
2. Library Administration	Presents Memorandum of Agreement to Executive Vice President for review	April 1982
3. Library Administration/ Executive Vice President	Execute Memorandum of Agreement	May 1982
4. Library Administration/Executive Vice President	Renew Agreement, accommodating any changes in circumstances	Annually
5. Library Administration	Sets policy governing the control of temperature, humidity and light levels throughout system	May 1982
6. Director for Administrative Services	Implements policy, monitors adherence	Ongoing activity, beginning May 1982

3) Expand the range of binding options and educate decision-makers.

Who	What	When
1. Preservation Committee	Studies preservation binding options; prepares a report	Dec. 1981-March 1982
2. Preservation Committee/Director for Circulation Services/Binding Supervisor	Meet to discuss report; explore feasibility and costs with current binders and others if deemed necessary	April 1982
3. Preservation Committee/Director for Circulation Services/Binding Supervisor	After analysis of cost information, draft and execute agreements with binders, specifying types of binding to be employed, methods of communicating binding choices, and other terms of agreement deemed necessary	May 1982
4. Preservation Committee/Binding Supervisor	Prepare binding manual; educate decision-makers with hands-on demonstrations showing each option and its appropriate use	May-July 1982
5. Binding Supervisor	Monitors both local decisions and performance of binders; works to settle any problems which may arise; consults with Preservation Committee as appropriate	Ongoing activity
6. Directors for Administrative and Circulation Services/ Preservation Committee	Prepare justification for increases in the binding budget as necessary, to take advantage of the full range of commercial binding options	Annually

Who	What	When
7. Preservation Committee/Director for Circulation Services/Binding Supervisor	Evaluate agreements with binders to take advantage of improvements in binding technology	Annually
8. Preservation Committee	In cooperation with the appropriate departments, reviews budgeting for restoration work now done by specialists outside the Library to determine if our needs are being met; makes recommendations to Library Administration	Second year

4) Establish program for preservation searching, photoduplication, and microfilming.

Who	What	When
1. Collection Development Group/Preservation Committee Representatives/ Locked Stack Committee	Meet to discuss the role and scope of preservation searching, criteria to be considered in decision-making, and options for ultimate disposition	Jan.-Feb. 1982
2. Collection Development Group/Preservation Committee Representatives	Develop decision-making guidelines; develop a form for the uniform recording of search results and decisions as well as other necessary control devices or guidelines, (e.g., a fund code for monitoring replacement purchases)	March-May 1982
3. Collection Development Group	Train LA's to do preservation searching; implement uniform procedures	June 1982
4. Acquisitions Librarian	Maintains file of completed preservation search forms, compiles statistical information for annual report	Ongoing activity, beginning June 1982
5. Preservation Committee	Analyzes preservation search results as a planning tool for expanding preservation activities (e.g., in-house preservation photoduplication and microfilming)	Ongoing activity
6. Acquisitions Librarian	Develops guidelines for preservation photocopying and microfilming performed by Printing Services or other contractors; consults with Preservation Committee	March-June 1982

Who	What	When
7. Acquisitions Librarian	Monitors output of photoservices; inspects preservation microfilm	Ongoing activity
8. Acquisitions Librarian/Director for Administrative Services	Explore alternate location for storing master negatives of preservation microfilm	Second year
9. Cataloging Department	Develops procedure for reporting preservation master negatives to National Register of Microform Masters and other appropriate locations	Second year

5) Provide space and renovate facilities for preservation activities.

Who	What	When
1. Preservation Committee/Conservation Technician/ Binding Supervisor	Confer and determine space and facility renovation needed for current preservation work	July 1982
2. Preservation Committee	Investigates potential space in Alderman for the consolidation of current preservation work and for future expansion; recommends a space re-allocation plan. Makes site visits to specified branch libraries to assess available space for conservation work stations	July-Sept. 1982
3. Library Administration	Allocates space in Alderman for preservation work	Sept. 1982
4. Preservation Committee	Designs a plan for the renovation of reallocated space in Alderman for preservation work; designs a compact conservation work station for specified branches	Sept. -Oct. 1982
5. Director for Administrative Services	Obtains cost estimate from the Physical Plant for the renovation of allocated space in Alderman and for the construction of work stations for branch libraries	Oct.-Nov. 1982
6. Library Administration	Allocates funds for the renovation of space in Alderman and for the construction of work stations; issues work orders for the construction	Dec. 1982

6) Implement a coordinated plan for disaster prevention.

Who	What	When
1. Director for Administrative Services	Maintains contact with Physical Plant to assure that: A) Library buildings in need of deferred maintenance are included in the University's maintenance program; B) Libraries receive prompt response from repair crew on emergency service calls	Ongoing activity, beginning immediately
2. Committee on Library Safety and Emergencies	Writes safety checklist for inspections, emphasizing fire hazards and potential for water damage	Oct.-Dec. 1981
3. Committee on Library Safety and Emergencies	Arranges training sessions to prepare Emergency Planning Coordinators to conduct inspections on emergencies	Jan.-Feb. 1982
4. Emergency Planning Coordinators	Using safety checklist, monitor library buildings for potential disasters, reporting problems to the appropriate department and to the Committee on Library Safety and Emergencies	Ongoing activity, beginning March 1982
5. Emergency Planning Coordinators	Conduct follow-up inspections of corrective actions	Ongoing activity, beginning March 1982
6. Committee on Library Safety and Emergencies	Arranges orientation sessions to educate staff members on their role in disaster prevention	Ongoing activity, beginning Nov. 1981
7. Alderman Library Security and Fire Protection Committee	Continues its work to install a fire detection and alarm system throughout Alderman Library	Already begun; installation scheduled 1982/84

Who	What	When
8. Committee on Library Safety and Emergencies	Investigates the possibility of installing fire detection and alarm systems in all branch libraries by: A) gathering complete information on status; B) consulting with Library administration, Physical Plant and University Fire Safety Director to determine cost and feasibility of installing systems; C) designing a phased plan for installing systems	June-Sept. 1982
9. Library Administration	Installs fire detection and alarm systems in branch libraries according to phased plan	As funds permit
10. Committee on Library Safety and Emergencies	Investigates alternative ways to safeguard library buildings when unoccupied, particularly with regard to water damage; recommends the best alternatives to administration	June-Sept. 1982
11. Library Administration	Implements plan to safeguard library buildings when unoccupied	As funds permit

7) Implement a coordinated plan to insure that Library staff can effectively meet any disaster which threatens the Library's collections.

Who	What	When
1. Committee on Library Safety and Emergencies	Determines the quantity and type of emergency supplies to be purchased for Emergency Supply Boxes	In process
2. Director for Administrative Services	Purchases emergency supplies, using funds from preservation grant	In process
3. Committee on Library Safety and Emergencies	Distributes emergency supplies to branches and Alderman	Nov.-Dec. 1981
4. Committee on Library Safety and Emergencies/University Fire Safety Director	Investigates current supply, type and location of fire extinguishers in Alderman and the branches	Jan.-Feb. 1982
5. Director for Administrative Services	Requests needed fire extinguishers based on findings of Committee	F.Y. 1981/82 and F.Y. 1982/83
6. Committee on Library Safety and Emergencies	Revises one-page summary of general emergency procedures; page is then added to Disaster Action Manual	Oct.-Nov. 1981
7. Committee on Library Safety and Emergencies	Invites an expert to conduct 1-2 day training session for Disaster Action Specialists	Jan.-Feb. 1981
8. Disaster Action Specialists	Complete Disaster Action Manual by: 1) writing instructions for constituting a Disaster Action Team; 2) writing a local salvage plan; 3) writing evacuation and salvage guidelines	Feb.-July 1982

Who	What	When
9. Committee on Library Safety and Emergencies	Establishes and maintains contacts with local officials: fire, police, etc.	Ongoing activity, beginning Oct. 1981
10. Committee on Library Safety and Emergencies	Arranges orientation sessions for staff to emphasize each person's role in emergency preparedness	Ongoing activity, beginning Nov. 1982
11. Committee on Library Safety and Emergencies	Arranges for training in fire-fighting techniques for interested and/or appropriate staff	Ongoing activity, beginning Nov. 1982
12. Committee on Library Safety and Emergencies	Designs and distributes Disaster and Accident Report Form to collect information on types, causes, actions, and resolutions of emergencies in the library	Completed
13. Department Heads	Assume responsibility for reporting emergencies on the Report Form	Ongoing activity, already begun
14. Committee on Library Safety and Emergencies	Evaluates the actions taken in response to emergencies and the recovery operations to determine if the Library is maintaining an adequate level of disaster preparedness	Ongoing activity, already begun
15. Director for Administrative Services/ University Risk Manager	Reviews and updates insurance policies annually to keep pace with collection growth and inflation	Ongoing activity, already begun

Who	What	When
16. Committee on Library Safety and Emergencies	Investigates the need and feasibility for duplicating records such as the shelflist and circulation files to document losses in the event of a disaster; develops a plan for duplicating appropriate files; obtains cost estimate for duplicating files	Mar.-May 1982
17. Library Administration	Allocates funds for duplicating recommended files	As funds permit
18. Director for Administrative Services	Arranges for and oversees the duplication of recommended files	As funds permit

8) Coordinate the purchase of preservation equipment as part of the overall program.

Who	What	When
1. Director for Administrative Services	Reviews departmental equipment requests, extracting requests for preservation equipment. Presents requests to Preservation Committee for a review and ranking for relative priority within the preservation program	Sept. 1981 and annually

9) Coordinate purchasing and monitor quality of preservation supplies.

Who	What	When
1. Conservation Technician	Is designated coordinator of preservation supplies purchasing, consulting with the Preservation Committee as necessary; all departments are informed that preservation supply requests are to be routed through the coordinator	Nov. 1981
2. Conservation Technician	Reviews supply requests and dispenses appropriate mending supplies to specified locations	Ongoing activity
3. Preservation Committee	Contracts with conservation specialist for a workshop/review session on mending techniques and supplies for all staff involved in mending activities (see also: Plan #10)	Second year
4. Conservation Specialist	Reviews and discusses range of available supplies and their appropriate uses	Second year
5. Conservation Technician	Monitors quality of supplies purchases; gathers information on new suppliers and products	Ongoing activity, already begun

10) Continue to improve in-house mending and binding techniques.

Who	What	When
1. Preservation Committee/Conservation Technician	Investigate mending needs of each location; draft guidelines listing repair techniques which should be performed in each location and those which can best be performed by the centralized Mending Section	Second year
2. Preservation Committee	Contracts with conservation specialist for a workshop/review session on mending techniques and supplies for all staff involved in mending activities	Second year
3. Conservation Specialist	Conducts a hands-on workshop of mending and in-house binding techniques appropriate to the preservation needs of a research library	Second year
4. Conservation Technician/Preservation Committee	Develop guidelines and training materials for the mending and in-house binding performed in each location	Second year, following specialist's visit
5. Conservation Technician/Preservation Committee	Prepare a guide for staff members making preservation treatment decisions, to explain the range of in-house mending and binding options available and their appropriate uses	Second year
6. Conservation Technician	Provides hands-on training for new personnel charged with mending	Ongoing activity, already begun

11) Establish staff education programs on the care and handling of books and other library materials.

Who	What	When
1. Preservation Committee	Initiates a training program utilizing the Yale slide-tape show, "Care and Handling of Books"; presents to all Library staff, including student employees	Jan.-March 1982
2. Preservation Committee	Schedules presentations of slide-tape show for new staff, following academic calendar	Ongoing activity
3. Preservation Committee	Makes use of open entry as a means of disseminating preservation information to the staff	Ongoing activity

12) Establish a preservation unit.

Who	What	When
1. Preservation Committee	Prepares draft job description for preservation administrator and presents draft to Library administration	Nov.-Dec. 1981
2. Library Administration	Examines the cost/benefit implications of transferring any faculty position which becomes vacant to create the position of preservation administrator	Ongoing activity, beginning Nov. 1981
3. Director for Circulation Services/Preservation Committee	Study current job descriptions of Binding/Mending section and present to Library administration. Recommended job levels and job descriptions based on expanding preservation activities	Nov. 1981-June 1982
4. Binding/Mending Supervisor	In consultation with the Preservation Committee, prepares a form for recording data on quantity and type of repairs and in-house binding performed to be used as a planning tool for future expansion of preservation activities	Nov.-Dec. 1981
5. Mending/Binding Section	Gathers data on repairs and in-house binding performed	Ongoing activity, beginning upon completion of form
6. Library Administration	Seeks to provide additional staff to support expanding preservation activities, using new programs as leverage with the University administration and state government	As needed

Who	What	When
7. Library Administration	Establishes a preservation unit	Upon hiring of a preservation administrator
8. Library Administration	Places Binding/Mending Section under the supervision of the preservation administrator	Upon hiring of Preservation Administrator
9. Preservation Administrator/Library Administration	Investigates the cost/benefit implications of upgrading the present in-house mending and binding unit to a full conservation studio, headed by a trained conservator. The investigation should include analysis of the data collected on repairs, the full restoration needs of all locations housing rare materials, current budgeting for restoration work now done by specialists outside the Library, and staffing and space implications	Upon hiring of Preservation Administrator
10. Preservation Administration/ Library Administration	Investigate the implications of consolidating all initial physical processing in the new preservation unit, including the effects on workflow, the physical transportation of materials, staffing, and space	During second year of operation of preservation unit

13) Implement a coordinated collection maintenance program.

Who	What	When
1. Department Heads	Designate a staff member to serve as stack supervisor for each unit which houses materials (including Reference, Reserve, Periodicals, etc.) where such responsibility has not been designated; write new duties into the job description of these individuals	Jan. 1982
2. Preservation Committee	Initiates a training program, utilizing the Yale slide-tape show, "Care and Handling of Books" (see: Plan #11)	Second year
3. Stack Supervisors	Coordinate training of all shelvers	Ongoing activity
4. Preservation Committee	Prepares and distributes written guidelines and background literature to all stack supervisors to supplement A-V training program	June-Aug. 1982
5. Preservation Committee/Alderman Stack Supervisor/ Conservation Technician	Develop written guidelines for the identification of damaged and deteriorating materials and train stack supervisors in the use of these guidelines	Second year
6. Stack Supervisors	Train shelvers in the identification of damaged and deteriorating materials using the written guidelines	Second year
7. Preservation Committee	Develops procedures for the cleaning of materials and a plan for a pilot program	Third year

Who	What	When
8. Alderman Stack Supervisor	Institutes pilot cleaning program and collects appropriate data as a planning tool for future expansion	Third year
9. Preservation Committee	Develops plan for sampling and/or screening targeted areas of the collection to determine condition and treatment requirements, in order to gather data in support of increased staffing and/or major treatment programs (e.g., mass deacidification)	Third year

14) Upgrade equipment employed for the housing, transportation and use of library materials.

Who	What	When
A. Photocopy Machines		
1. Director for Administrative Services	Makes site visits to all locations to inspect machines currently in use	Sept.-Oct. 1981
2. Director for Administrative Services/ Preservation Committee	Investigate recommended models; prepare statement of need and recommendations	Nov. 1981
3. Director for Administrative Services	Prepares and presents a request for necessary replacements to Printing Services	Nov. 1981
4. Director for Administrative Services	Continues to work with Printing Services until desired machines are obtained	Ongoing activity
B. Book Drops		
1. Director for Administrative Services/ Preservation Committee	Investigates available models; recommends model to replace Alderman first floor book drop	Nov. 1981-Jan. 1982
2. Director for Administrative Services	Arranges for replacement of Alderman first floor book drop	Feb.-Sept. 1982
3. Preservation Committee	Makes site visits to inspect book drops in all other locations	Second year

Who	What	When
4. Preservation Committee	Follows up site visits with a memorandum to all locations requesting that they lock book drops (if possible) during the hours the library is open	Second year
5. Preservation Committee	Investigates models available at that time; presents statement of needs and recommends a phased replacement plan to Director of Administrative Services	Second year
6. Director for Administrative Services	Implements phased replacement plan	F.Y. 1982-83 F.Y. 1983-84
C. Library Delivery Truck Trays		
1. Preservation Committee/Director for Administrative Services (Study committee on document delivery?)	Investigate alternatives; develop a phased replacement plan	Second year
2. Director for Administrative Services	Implements phased replacement plan	F.Y. 1982-83 F.Y. 1983-84
D. Other Equipment		
1. Preservation Committee/Director for Administrative Services	Make follow-up site visits to inspect all other library equipment for its potential to damage library materials; interview staff as necessary	Second year

Who	What	When
2. Preservation Committee/Director for Administrative Services	Prepare inventory of needs; investigate alternatives and costs; set priorities; prepare phased plan for replacement of equipment identified in Step 1	Second year
3. Director for Administrative Services	Implements phased replacement plan	As funds permit

15) Establish user education programs.

Who	What	When
1. Preservation Committee	Writes brief articles on the Preservation Planning Project and other preservation activities for the Cavalier Daily, Inside UVA, the Daily Progress, etc.	Ongoing activity, beginning Fall 1981
2. Preservation Committee	Contacts Reference Department regarding the inclusion of basic preservation information in Library tours and orientation programs	June-Aug. 1982
3. Preservation Committee	Investigates design and production of posters and bookmarks conveying preservation concerns; mounts preservation exhibit	Second year

16) Upgrade current air-conditioning/heating systems to full climate control systems.

Who	What	When
1. Preservation Committee	Develops an environmental monitoring program for all locations.	Second year
2. Designated Staff	Monitor environmental conditions in all locations	According to pre-determined schedule
3. Preservation Committee	Makes site visits to fully investigate each location's current system	Third year
4. Preservation Committee/Director for Administrative Services	Meet with Air Conditioning Superintendent to get detailed information on the modifications required to upgrade systems	Third year
5. Preservation Committee/Director for Administrative Services	Develop alternate plans for the phased upgrading of current air-conditioning/heating systems, based on the above activities	Third year

17) Upgrade the cleaning of facilities and pest control.

Who	What	When
1. Director for Administrative Services	Obtains and analyzes current contracts for housekeeping and pest control, as well as cleaning done by Physical Plant	Jan.-June 1982
2. Library Administration	Designates a staff member in each location to have responsibility for monitoring; provides initial guidance	June 1982
3. Designated Staff	Report semi-annually to the Director for Administrative Services on conditions, as well as reporting specific problems as they occur	As scheduled and ongoing activity
4. Director for Administrative Services	Follows up on reports; adjusts contractual agreements as necessary	Ongoing activity

18) Control light levels in areas where materials are housed.

Who	What	When
1. Preservation Committee	Expands light level monitoring program to all locations by doing follow-up site inspections, taking UV readings, and collecting information on the number and type of bulbs to be replaced and the extent of exposure to natural light	Third year
2. Preservation Committee/Director for Administrative Services	Work with locations to devise ways of reducing natural light exposure by shifting materials, closing blinds, etc., to achieve compliance with environmental control policy (see: Plan #2)	Third year
3. Preservation Committee/Director for Administrative Services	Evaluate data collected in monitoring program; collect cost information; and develop a phased plan to purchase UV filters for fluorescent bulbs, to replace incandescent fixtures where necessary, and to provide protection from UV radiation where materials are exposed to natural light	Third year
4. Director for Administrative Services	Carries out phased plan	As funds permit

FOOTNOTES

1. In the survey of condition, volumes were graded according to the condition of their paper, binding and boards or covers. Paper condition was weighted in the scoring because of its relative importance in determining overall condition. The percentage reported here is that of the volumes which received an overall score of two, meaning "needs immediate attention, should not be used." See "Report of the Task Force on Physical Condition of the Collections," pp.4-8, for a fuller description of the grading system, and Table 1, p.14, of the same report, for a summary of the survey's findings.

2. This percentage reflects the number of volumes which received a score of two on the basis of their paper condition alone. Ibid., p.6 and Table 1, p.14.

3. Ibid., pp.32-43 (microforms) and pp.50-55 (newspapers).

4. Connie Kelley, Acquisitions Librarian, has made the following statement concerning this financial loss: "If the decision were made to replace even half of the deteriorated 27% of the collection, the cost would be prohibitive. To replace 13.5% of the collection of 2,000,000 volumes would cost between $6.75 million and $10.8 million. These figures represent replacement costs for modern reprints at $25.00 per volume and replacement in microfilm at $40.00 per reel. This assumes that the 270,000 volumes to be replaced would in fact be available in either reprint or microfilm."

5. Articles by Banks and Trinkhaus-Randall included in Technical Resources Packet A provide an excellent overview of the question of environmental standards. See also Carl J. Wessel, "Environmental Factors Affecting the Permanence of Library Materials," Library Quarterly 40 (January 1970): 39-84.

6. "Report of the Task Force on Environmental Conditions," pp.2-3, Appendix C, Appendix D, and Appendix F.

7. Ibid., pp.3-4 and Appendix E.

8. Ibid., Appendix F, and "Report of the Task Force on the Organization and Operation of Preservation Functions," p.20.

9. Wessel, pp.60-65, and Richard Daniel Smith, "Paper Impermanence as a Consequence of pH and Storage Conditions," Library Quarterly 39 (April 1969): 153-195.

10. Articles by Paul Banks and Pamela W. Darling included in the Technical Resources for the project discuss general criteria for evaluating equipment. Certain problems with existing

equipment are recorded in the "Report of the Task Force on Environmental Conditions," p. 5 and Appendix F; "Report of the Task Force on Physical Condition of the Collections," p.43-44; and,"Report of the Task Force on the Organization and Operation of Preservation Functions," p.18.

11. "Report of the Task Force on the Organization and Operation of Preservation Functions," pp.4-21, 45-54; "Report of the Task Force on Physical Condition of the Collections," pp.45-47 (microforms); and, "Report of the Task Force on Preservation Resources," pp.9-11.

12. "Report of the Task Force on the Organization and Operation of Preservation Functions," pp.23-29.

13. "Report of the Task Force on Preservation Resources," pp.3-4 and Appendix I.

14. Ibid., pp.6,12, and "Report of the Task Force on the Organization and Operation of Preservation Functions," pp.14,22.

15. "Report of the Task Force on the Organization and Operation of Preservation Functions," p.22.

16. Ibid., p.22, and "Report of the Task Force on Preservation Resources," p.3.

17. "Report of the Task Force on Crisis Management," pp.4-5.

18. Ibid., pp.5-10.

19. See articles in Technical Resources Packet C.

20. "SituationalAnalysis," p.15, and Pamela W. Darling and Sherelyn Ogden, "From Problems Perceived to Programs in Practice: The Preservation of Library Resources in the U.S.A., 1956-1980," Library Resources and Technical Services 25 (January/March 1981): 22-26.

21. William Middleton, Assistant Executive Vice President for the Physical Plant; interview with the Study Team and Messrs. Frantz and Stubbs, July 24, 1981.

22. An excellent survey of commercial binding options and their preservation implications is now available to facilitate this process. See Gay Walker, "Library Binding as a Conservation Measure," New Haven, CT, November 1979, unpublished typescript.

23. Preservation searching is the process whereby books which cannot be repaired or rebound are subjected to a rigorous bibliographic search process to determine if other copies/editions are held by the Library, or modern reprints or microforms available. The findings of the search contribute to a well-reasoned decision on the ultimate disposition of the book, e.g., photocopy and discard, film and retain the orginal in the Locked Stack.

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In addition, the Study Team and Task Forces made extensive use of the numerous articles and other publications supplied to us by ARL/OMS as "Technical Resources" in support of the project. A listing of these follows and the materials themselves are retained in the Projects files.